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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,512	01/14/2005	Takeo Komiya	50212-604	4391

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EXAMINER	
BLEVINS, JERRY M	

ART UNIT	PAPER NUMBER
2883	

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/501,512	KOMIYA ET AL.	
	Examiner	Art Unit	
	Jerry Martin Blevins	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07/15/04,01/14/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In the present case, the abstract exceeds the maximum allowed limit of 150 words.

Appropriate correction required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pre Grant Publication to Takizawa et al., number 2001/0053260.

Regarding claim 1, Takizawa teaches an optical waveguide module (Figures 1 and 2), comprising: an optical circuit (page 2, paragraph 33), constituted by a substrate (10) and an optical waveguide (20) formed on the substrate and having a groove (11) formed at a predetermined inclination angle with respect to the vertical axis of the optical waveguide so as to cross a predetermined portion of the optical waveguide (Figure 2 and page 4, paragraph 73), a reflection filter that s installed on the inside of the groove of the optical circuit including a portion where signal light transmitted through the optical waveguide passes through, and that reflects part of the signal light according to a specific reflectivity (page 4, paragraph 70), and a photodetector (30) that detects reflected light (90) of the signal light reflected by the reflection filter, wherein the photodetector is arranged such that the reflected light is made incident onto the light incident face thereof at a predetermined angle with respect thereto (Figure 1).

Regarding claim 2, Takizawa teaches the limitations of the base claim 1. Takizawa also teaches that the optical circuit is a planar optical waveguide type optical circuit including an optical waveguide of a planar optical waveguide type formed as the optical waveguide on the substrate (page 2, paragraph 34 and paragraph 95, pages 6 and 7).

Regarding claim 5, Takizawa teaches the limitations of the base claim 1. Takizawa also teaches an optical path changing means (12) for changing the light path of the reflected light to a light path effecting incidence onto the light incident face of the photodetector at a predetermined angle with respect thereto (Figure 1 and paragraph 10, page 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 4, and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takizawa in view of US Pre Grant Publication to Kimura, number 2002/0031307.

Regarding claim 3, Takizawa teaches the limitations of the base claim 1. Takizawa does not teach that the optical circuit includes an optical fiber fixed as the optical waveguide on the substrate. Kimura teaches an optical circuit (Figure 4) including an optical fiber (50) fixed on a substrate (10). It would have been obvious to one of ordinary kill in the art at the time of the invention to include the fiber of Kimura as the waveguide of Takizawa. The motivation would have been to reduce light guiding costs by using well-known light guiding equipment.

Regarding claim 4, Takizawa teaches the limitations of the base claim 1. Takizawa also teaches that the reflected light is made incident onto the incident face of the photodetector at a predetermined angle (Figure 1). Takizawa does not teach a mounting member disposed on the top side of the optical circuit for mounting the photodetector on the photodetector mounting face thereof, wherein the mounting member is disposed with the photodetector mounting face being obliquely inclined at an angle with respect to the top surface of the optical circuit. Kimura teaches a mounting member disposed on the top side of the optical circuit for mounting a photodetector

(Figure 4, element 40) on the photodetector mounting face thereof (page 2, paragraph 39) wherein the mounting member is disposed with the photodetector mounting face being obliquely inclined with respect to the top surface of the optical circuit (Figure 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to mount the photodetector of Takizawa at an obliquely inclined angle in a mounting member, as taught by Kimura. The motivation would have been to improve optical alignment.

Regarding claim 6, Takizawa teaches the limitations of the base claim 5. Takizawa also teaches that the optical path changing means is a reflection mirror (Figure 1). Takizawa does not teach a mounting member disposed on the top side of the optical circuit for mounting the photodetector on the photodetector mounting face thereof, wherein the optical path changing means is formed on a predetermined of the mounting member. Kimura teaches a mounting member disposed on the top side of the optical circuit for mounting a photodetector (Figure 4, element 40) on the photodetector mounting face thereof (page 2, paragraph 39) wherein an optical path changing means (Figure 8, element 63) is formed on a predetermined face of the mounting member (page 2, paragraph 39 and Figure 8). It would have been obvious to one of ordinary skill in the art at the time of the invention to mount the photodetector of Takizawa such that the optical path changing means is formed on a predetermined face of the mounting member, as taught by Kimura. The motivation would have been to improve optical alignment.

Regarding claim 7, Takizawa in view of Kimura teaches the limitations of the base claim 6. Takizawa also teaches that the reflection mirror is a total reflection mirror (Figure 1).

Regarding claim 8, Takizawa teaches the limitations of the base claim 1. Takizawa also teaches that the reflected light is made incident onto the photodetector at a predetermined angle (Figure 1). Takizawa does not teach that the photodetector is mounted on the top surface of the optical circuit. Takizawa also does not teach that the photodetector is obliquely inclined at an angle with respect to the top surface of the optical circuit. Kimura teaches a photodetector (Figure 4, element 40) mounted on the top surface of an optical circuit (Figure 4 and page 2, paragraph 39) and that the light incident face of the photodetector is obliquely inclined at an angle with respect to the top surface of the optical circuit (Figure 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to mount the photodetector of Takizawa at an obliquely inclined angle in a mounting member, as taught by Kimura. The motivation would have been to improve optical alignment.

Regarding claim 9, Takizawa in view of Kimura teaches the limitations of the base claim 8. Takizawa also teaches that a light receiving portion of the photodetector is, viewed from the light path of the reflected light, disposed at a position opposite to the light incident face (page 6, paragraph 93).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takizawa in view of US Patent to Shanley, number 6,477,285.

Regarding claim 10, Takizawa teaches the limitations of the base claim 1. Takizawa does not teach plural optical waveguides as the optical waveguide and a photodetector array having plural photodetectors corresponding to the plural waveguides as the photodetector. Shanley teaches an optical circuit (Figure 25) comprising plural optical waveguides (1912) and a photodetector array having plural photodetectors (1914) corresponding to the plural waveguides. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the plural waveguides and photodetectors of Shanley as the waveguide and photodetector of Takizawa. The motivation would have been to allow simultaneous communication of multiple signals.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takizawa in view of US Patent to Yamamoto et al., number 6,078,707.

Regarding claim 11, Takizawa teaches the limitations of the base claim 1. Takizawa does not teach a coat film for preventing the reflection of the light within a predetermined wavelength band formed on the light incident face of the photodetector. Yamamoto teaches a photodetector (Figure 18a, element 120) wherein a coat film for preventing the reflection of the light within a predetermined wavelength band (25) is formed on the light incident face of the photodetector (Figure 18a and column 6, lines 41-57). It would have been obvious to one of ordinary skill in the art at the time of the invention to form a reflection preventative coat film, as taught by Yamamoto, on the photodetector of Takizawa. The motivation would have been to improve the filtering of the signal received by the photodetector.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMB

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